



#### Performance Materials: Activated Carbon Fiber

# Removing harmful substances to make our lives safe and sound

Activated carbon fiber made using our proprietary melt-spinning technology quickly adsorbs impurities and can be processed into various shapes. This makes them suitable for use as various types of liquid phase and gas phase filters in a wide range of industrial and consumer applications. Capable of selectively and efficiently removing impurities and harmful substances, they are used mainly in water purification, environmental protection facilities and equipment, as well as automotive applications. We will continue to provide high performance products that meet the needs of the times with the aim of making our lives safe and sound.



#### Activated carbon fiber

#### Unitika Ltd.

This product is an activated carbon material that is fibrous. Utilizing the excellent adsorption rate inherent to the fiber shape, it is used as a product for air purification and water purification applications.



#### Activated carbon fiber filters

#### Unitika Ltd.

Unitika has developed a wide range of filters using activated carbon fiber. These filters come in many different shapes and are used to remove harmful substances and impurities from water and the air.



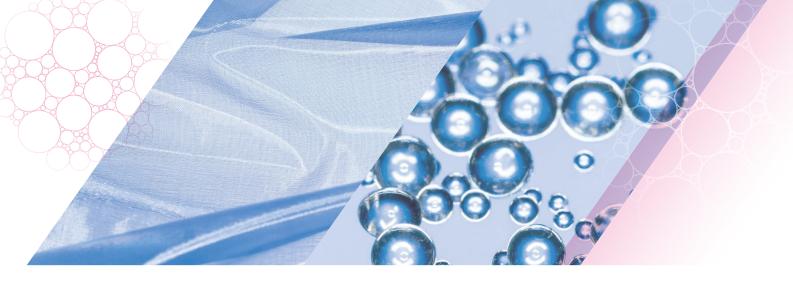
#### Porous Plate

#### Unitika Ltd.

Porous Plate is a water absorbent material made from polyester fibers. Featuring optimal sheet hardness and machinability along with superior water-absorbing and diffusing performance and dimensional stability, Porous Plate is used in humidifier elements, drain water evaporation plates, and more.







Performance Materials:Glass Fibers

# Made with our advanced production technology, our glass fibers are widely used in electronics and Industrial materials.

Our glass fibers are used in a variety of applications, including materials for electronic products, such as printed circuit boards for semiconductors and modules, building interior materials, nonflammable tents, and bag filters. Our unique yarn production facilities enable the production of one-of-a-kind yarns as well as the integrated production of yarns and fabrics. In the field of electronic materials, our yarns with a small fiber diameter for ultra-thin fabrics and yarns for special glass fabrics are extremely popular. In the area of industrial materials, we offer a wide range of products made with our weaving and post-processing technologies, as well as customized products to meet customer needs. Glass fiber is a performance material that holds huge potential.



Performance Materials:Glass Beads

# As Japan's leading glass beads manufacturer, Unitika offers extensive lines of products for various applications including road markings.

We are the leading manufacturer of glass beads in Japan, supplying products for road marking, blasting, grinding, dispersion, and filler applications. We also utilize our spheronization and high-precision classifying techniques in a wide variety of glass compositions to make products for spacer applications used in the electrical and electronics fields. Working to reduce the environmental impact of our products, we make glass bead products for filler applications in order to reduce the use of petroleum-based plastics and use recycled materials for approximately eighty percent of our production volume.



# Finished glass fabrics for printed circuit boards

#### Unitika Ltd.

Our line of high value-added products includes ultra-thin and low expansion models. We put the wealth of our collective expertise to work in everything from material manufacturing to weaving and surface treatment with an eye to making peerless products.



### Glass-fiber reinforced resin sheet

#### Unitika Ltd.

Glass-fiber reinforced resin sheet is a glass fiber-reinforced resin sheet. Due to its light weight and unbreakable property, its applications are expanding as a replacement for plate glass. Fire blocking, transparent, lightweight, and certified as a fire retardant material for use in buildings by the Japanese government, it can be used as an alternative to glass plates for smoke-proof vertical walls.



### Illumination cover

#### Unitika I td.

This glass fabric has been specially treated for use as an illumination cover. It will not shatter or melt during a fire and is more durable than plastic. It has been certified as a fire retardant material for use in buildings by the Japanese government.



# High Performance Glass Beads

#### Unitika Glass Beads Co., Ltd.

Glass beads have a highly sharp size distribution and are used in many kinds of spacer applications. They are especially suitable for applications that require heat resistance, load bearing, and insulation



### Glass Beads for road markings

#### Unitika Glass Beads Co., Ltd.

Glass beads are used in a wide range of road marking applications. Their retroreflective properties increase visibility at night, playing an important role in road safety. Recycled glass is used as a raw material.



### Filler for Plastic

### Unitika Glass Beads Co., Ltd.

When used as a filler, glass beads demonstrate excellent filling and flowing properties due to their spherical shape. The silane coupling agent provides an optimal surface treatment for the resin that is used.